

AD-A077 717 WOODS HOLE OCEANOGRAPHIC INSTITUTION MASS
CRUISE PLAN FOR LAUREL 2.(U)
MAR 68 R HEINMILLER
UNCLASSIFIED WHOI-TM-6-68

F/G 8/3

N00014-66-C-0241
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WOODS HOLE OCEANOGRAPHIC INSTITUTION

AD A 077717

Technical Memorandum No. 6-68

CRUISE PLAN FOR LAUREL 2

March 1968

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WOODS HOLE OCEANOGRAPHIC INSTITUTION
Woods Hole, Massachusetts

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Technical Memorandum No. 6-68

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CRUISE PLAN FOR LAUREL 2

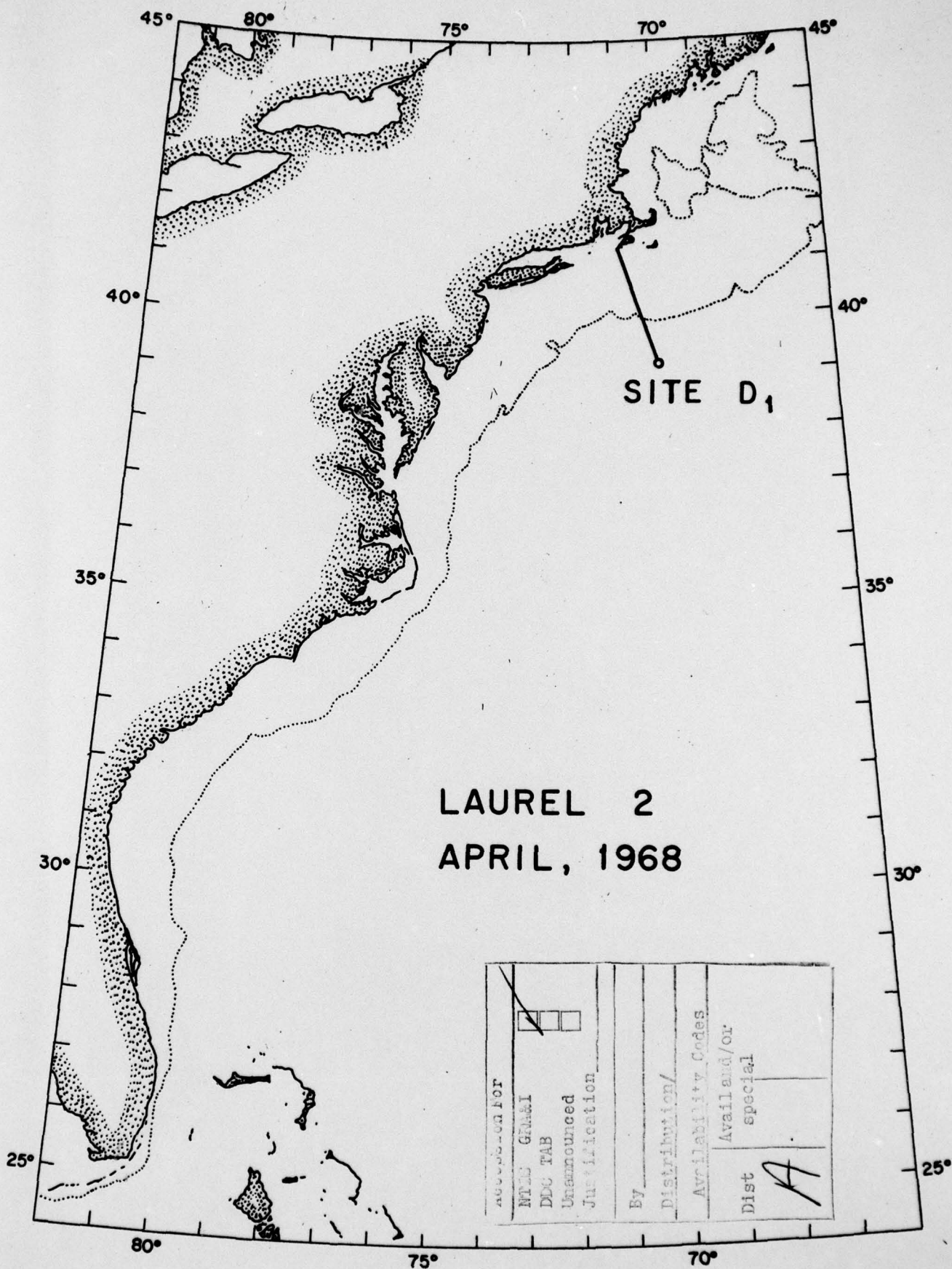
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R. Heinmiller
Chief Scientist

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March 1968

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This work has been carried out under Contract N00014-66-C0241, NR 083-004
with the Office of Naval Research.

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LAUREL 2
April, 1968

Introduction

The April 1968 Buoy Project cruise will be aboard USCGC LAUREL. The cruise will include both scientific and engineering work. It will be a single leg, leaving Woods Hole April 15 and returning on or before April 30. All work will be done at Site D₁ (39°10'N., 70°00'W.).

Test #1: All-Nylon Mooring - A long-term mooring will be set using a conical surface float and an all-synthetic mooring line. The line will be mainly 9/16" plaited nylon except in the recovery section, which will use 5/8" plaited nylon. A complete recovery section will be used. A wind recorder, telemetering tensiometer, and current meter will make up the instrumentation.

This mooring is a prototype of a scientific mooring to be used only at Site D₁ until the compound (wire-nylon) moorings are improved. It will be left for two months, to be picked up in June.

Test #2: Bottom Mooring - A bottom mooring using the syntactic foam float will be set for a short-term experiment (~ 6 days). If successful, it will be reset for a two month period. The purpose is to measure near-bottom currents. The mooring will carry a single current meter, a depth-modulated beacon, and a release.

Test #3: Engineering Mooring - A long-term surface mooring will be set as an engineering test of new ACCO 3 X 19 swaged aluminized wire. Instrumentation will include a telemetering tensiometer, two recording tensiometers, and a current meter. A recovery section using 16" glass spheres is included.

Release Experiments - A series of lowered experiments will be carried out. Object will be to investigate security and noise problems by monitoring release response via a conducting wire.

Personnel

R. Heinmiller, Chief Scientist
R. Simoneau

G. Tupper
C. Brown

Equipment:

Radio, Syntactic Foam Float	1
Radio, Toroid	1
Radio, Conical	1
Wind Recorder	2
Light, Conical	1
Light, Toroid	1
Syntactic Foam Float	1
Donut Float	1
Conical Float	1
Telemetry and Recording Tensiometer	1
Telemetry Tensiometer	1
Tensiometer, Recording	1
Acoustic Beacons, Depth-Modulated	3
Current Meter, Film	2
Current Meter, Tape	2
Acoustic Release	5
Glass Balls, 16"	45
Glass Balls, 10", with lights	4
Anchor, 600 lb. Weight	2
Anchor, Danforth, 100 lbs.	1
Anchor, Stimson, 3,000 lbs.	2

Wire

Test #1

None

Test #2

None

Test #3

500 m. 9/32" 3 x 19 swaged aluminized ACCO wire rope with jackets
and boots - 9000 RBS

500 m. ditto

500 m. ditto

Nylon

Test #1

500 m. 9/16" plaited nylon

500 m. ditto

500 m. ditto

500 m. ditto

360 m. ditto

60 m. 5/8" plaited nylon

2 m. ditto

50 m. ditto

Test #2

10 m. 9/16" plaited nylon

10 m. ditto

10 m. ditto

20 m. ditto

20 m. ditto (extra, to be used for long-term reset)

Test #3

500 m. 9/16" plaited nylon

438 m. ditto

85 m. 5/8" plaited nylon

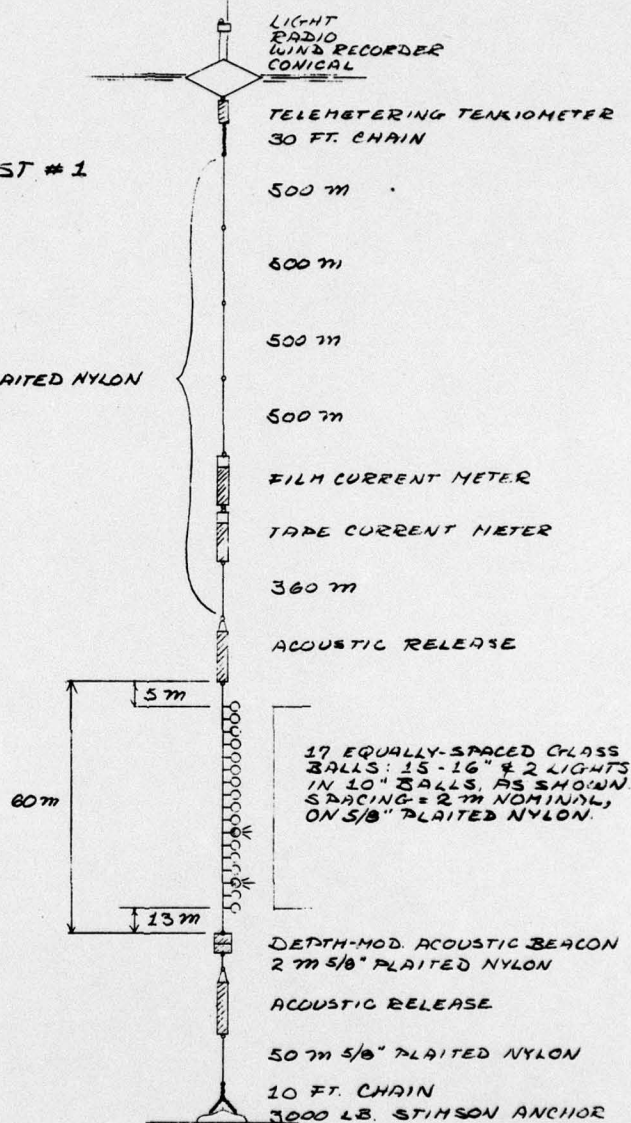
2 m. ditto

2 m. ditto

50 m. ditto

ENGINEERING TEST #1
APRIL '68

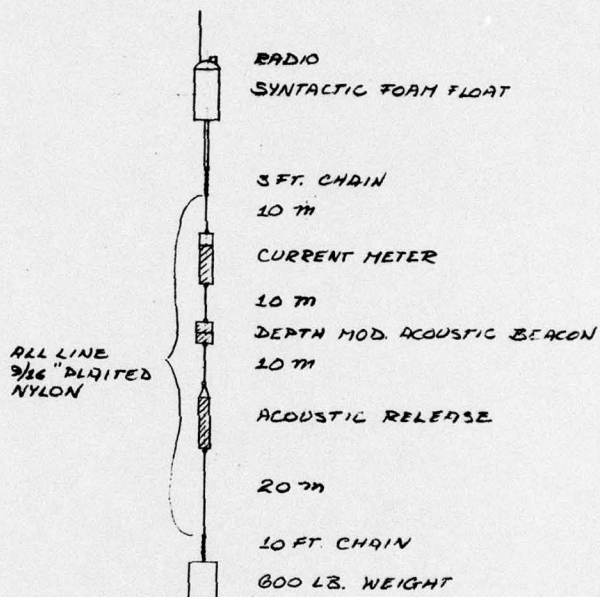
5/16" PLAITED NYLON



NOTES: PLACE STOPPER KNOTS ON 60m 5/16" NYLON SHOT, W/5 EXTRA KNOTS
PAINT ORANGE ALL 15" GLASS BALLS
STAMP WIRE ROPE TERMINATIONS

WOODS HOLE OCEANOGRAPHIC INSTITUTION
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BY EDG
SHEET 1 OF 3 DATE

TITLE
TEST #3
APRIL '68



BOTTOM MOORING
APRIL '68 CRUISE

WOODS HOLE OCEANOGRAPHIC INSTITUTION
WOODS HOLE, MASS.
PROJECT BY EDG
SHEET 2 OF 3 DATE

TITLE
TEST #2
APRIL 1968

LONG-TERM MOORING
APRIL '68 CRUISE

9/32" 3x19 SWAGED
ALUMINIZED IPS ALCO
WIRE ROPE W/JACKET
& ROOTS - 9000 RBS

NOTES: PLACE STOPPER KNOTS
ON 5/8" - 85 M SHOT, WITH
5 EXTRA KNOTS

ALL 16" BALLS TO BE
PAINTED ORANGE
STAMP WIRE ROPE TER-
MINATIONS

LIGHT
RADIO
TELEM. & RECORDING TENSIONMETER

TENSION ENCODER

30 FT. CHAIN

CURRENT METER, TAPE

500 m

500 m

500 m

TENSIONMETER

500 m 9/16" PLAITED NYLON

438 m 9/16" PLAITED NYLON

ACOUSTIC RELEASE #1

32 EQUALLY-SPACED GLASS
BALLS: 30-16" & 2 LIGHTS
IN 10" BALLS, AS SHOWN.
SPACING - 2 m NOMINAL, ON
5/8" PLAITED NYLON

85 m

21 m

DEPTH MOD. ACOUSTIC BEACON

2 m 5/8" PLAITED NYLON

TENSIONMETER

2 m 5/8" PLAITED NYLON

ACOUSTIC RELEASE #2

50 m 5/8" PLAITED NYLON

10 FT. CHAIN

3000 LB. STIMPSON ANCHOR

100 LB. DANFORTH
WITH 20' 1/2" CHAIN

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BY E.D.G.
SHEET 3 OF 3 DATE

TITLE
TEST # 3
APRIL 1968